2664

AMENDMENT TRANSMITTAL LETTER

Docket No.
LA-6898-104.US

Application No. 09/837793	Filing Date April 17, 2001	Examiner Not Yet Assigned	Art Unit N/A

Applicant(s): Mark Elliot

Invention: PRECISE NETWORK TIME TRANSFER

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TO THE COMMISSIONER FOR PATENTS
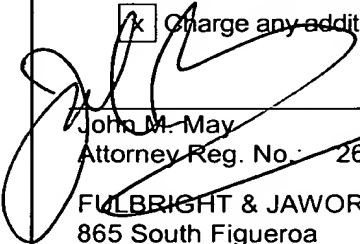
Transmitted herewith is an amendment in the above-identified application.
The fee has been calculated and is transmitted as shown below.

OCT 0 4 2002

Technology Center 2600

CLAIMS AS AMENDED

	Claims Remaining After Amendment	Highest Number Previously Paid	Number Extra Claims Present	Rate	
Total Claims	12	- 20 =		x	0.00
Independent Claims	1	- 6 =		x	0.00
Multiple Dependent Claims (check if applicable)			☐		
Other fee (please specify):					
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT:					

[x] Large Entity   ☐ Small Entity

☐ No additional fee is required for this amendment.

☐ Please charge Deposit Account No. ___50-0337___ in the amount of $ _____ .
  A duplicate copy of this sheet is enclosed.

☐ A check in the amount of $ _____ to cover the filing fee is enclosed.

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[x] The Commissioner is hereby authorized to charge and credit Deposit Account No. ___50-0337___
  as described below. A duplicate copy of this sheet is enclosed.

  [x] Credit any overpayment.

  [x] Charge any additional filing or application processing fees required under 37 CFR 1.16 and 1.17.

Dated: ___September 26, 2002___

John M. May
Attorney Reg. No.: 26,200

FULBRIGHT & JAWORSKI L.L.P.
865 South Figueroa
Twenty-Ninth Floor
Los Angeles, California 90017-2571
(213) 892-9315

Amendment Transmittal
I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: Box Non-Fee Amendment, Commissioner for Patents, Washington, DC 20231, on the date shown below.

Dated: September 26, 2002   Signature: _Linda Bakke_   (Linda Bakke)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Mark Elliot

Application No.: 09/837,793   Group Art Unit: N/A

Filed: April 17, 2001   Examiner: Not Yet Assigned

For: PRECISE NETWORK TIME TRANSFER

PRELIMINARY AMENDMENT

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Commissioner for Patents
Washington, DC 20231

Dear Sir:

Preliminary to examination, please cancel originally filed claims 1-12 without

prejudice and substitute the attached new claims 13-24.

These newly submitted claims correspond to claims deemed patentable over the prior

art submitted on 28 February 2002, for the reasons stated by the EPO in its capacity of IPEA

in the attached International Preliminary Examination Report (with 3 sheet Annex).. Also

enclosed for the Examiner's convenience is a copy of the International Search Report .

 This amendment is being made without prejudice for the sole purpose of expediting

prosecution of this application. In particular, Applicant makes no admission as to the

patentability of the cancelled claims, and should not be estoppel from later arguing that those

claims are also directed to patentable subject matter.

It is noted for the record that neither X reference cited by the EPO has any obvious

connection with maintaining precise synchronization between two clocks or with packet-

based transmission protocols in which time of transmission and time of reception data is

protected by an associated CRC field (or other error checking code). It is also noted for the record that inserting the actual time of reception or transmission at the physical interface into the data packet of the "NTP" time protocol by (as apparently advocated by Ulrich Schmidt et al at Vienna Technical University), would require an "on the fly" recalculation of the mandatory CRC field and relatively complex special purpose hardware.

In contrast, Applicant utilizes an external "auxiliary" receive timestamp structure which merely captures the actual time of receipt at the physical interface of the network boundary, but makes no changes to the received data. Rather than recalculating any associated error code, applicant is thus able to use the existing code and process or forward the received data packets in a completely transparent manner without any attendant complexity or delay in the physical layer. Similarly, the outgoing packet can be released at precisely the scheduled time, with any required CRC or other protocol required information calculated in advance based on a future scheduled time, rather than calculated on the fly based on the current actual time. If the packet is not released as scheduled, it can be rescheduled and the affected fields recomputed and rewritten at the application layer, with no impact on the physical layer or on the transmission protocol.

Dated: September 26 2002

Respectfully submitted,

By

John M. May
Registration No.: 26,200
FULBRIGHT & JAWORSKI L.L.P.
865 South Figueroa
Twenty-Ninth Floor
Los Angeles, California 90017-2571
(213) 892-9200
(213) 680-4518 (Fax)
Attorneys for Applicant